CLAIMS

1. A method of driving on a movable piece material over a drive-on path, comprising the steps of providing a drive-on position of the piece material inside a drive-on region; computing control data sets preliminarily in a first computation step; providing in the control data set a travel set which describes the drive-on path at the drive-on position; starting the first computation step for the travel set from a fixed drive-on position of the piece material; optimizing the travel set to the first fixed position of the piece material with respect to the drive-on speed; determining, directly before a start of a drive-on movement in accordance with the travel set, an actual drive-on position of the piece material; performing a second computation step which a corresponding actual travel set changed depending on the determined actual drive-on position of the piece material so that the drive-on path is changed in direction of the actual drive-on position; and performing a drive-on movement by working off of the travel set determined in the second computation step.

2. A method as defined in claim 1; and further comprising providing in the travel set an information about path pieces which describe

the drive-on path at the drive-on position, wherein the path pieces are driven-on one after the other.

3. A method as defined in claim 2, wherein the control data set contains a first travel set for a first drive-on position and a second travel set for a second drive-on position, with which the first computation step can be computed in advance, wherein the second travel set includes the path pieces which reproduce a drive-on path to the second drive-on position, wherein prior to reaching an end position of the first travel set, at least a first of the path pieces of the second travel set is taken into consideration to guarantee a jerk-free transition of the drive-on movement of the first travel set to the second travel set.

4. A method as defined in claim 2, wherein during the second computation step the respective actually worked off path piece is changed depending on the detected actual position of the piece material, in that an end point of a path piece of the travel set is displaced by a path which depends on the actual drive-on position of the piece material.

5. A method as defined in claim 1, wherein with the second computation step the corresponding actual worked off path piece is changed depending on the movement speed of the piece material, in that the speed of the piece material is taken into consideration over the total travel set for providing a jerk-free acceleration and braking of the drive-on movement.

6. A method as defined in claim 5, wherein a speed of the piece material is taken into consideration sine-square over the whole travel set, so that in a drive-on region and in an end region a small speed of the piece material is taken into consideration in the second computation step.

7. A method as defined in claim 1, wherein several travel sets are preliminarily computed in the first computation step, wherein in the case of travel sets associated with several movable piece materials or one movable piece material are not converted into a drive-on movement when in the first computation step it is determined that the drive-on

movement of the respective movable piece material has not reached within the drive-on region in a proper time.

8. A method as defined in claim 7, wherein the respective movable piece material is not reached the drive-in region in a proper time when the respective piece material is located in a movement direction behind a second position.

9. A control apparatus for controlling a drive-on movement of a drive-on control apparatus of a drive-on device for a movable piece material in which a drive-on position is driveable-on within a drive-on region in accordance with a travel set, the control apparatus comprising a first computing means for preliminarily computing control data sets in a first computation step, wherein the control data sets include at least one travel set computed based on a fixed drive-on position of the piece material in advance, and wherein the travel set describes a drive-on path, wherein the computed travel set is optimized for fixed position of the piece material with respect to a drive-on speed; a detector system for detecting an actual position of the piece material; a second computing means for

performing directly before a start of the drive-on movement a further computation for the travel set in a second computation step, wherein the actual travel set is changed depending on the determined actual position of the piece material so that the drive-on path is changed in direction of the drive-on position; and a control element for controlling a drive-on movement by working off the travel set changed in the second computation step.

10. A control apparatus as defined in claim 9; and further comprising a storage element for storing a plurality of the travel sets in advance.

11. A control apparatus as defined in claim 9, wherein at least one of the first and second computing means is designed so that during transition from the first travel set to the second travel set path pieces of the first travel set are compensated with path pieces of the second travel set so that a substantially jerk-free transition is reached from the movement of the first travel set to the movement of the second travel set.